

Grade 3 Target E

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[Content Domain: Number & Operations in Base Ten](#)

[Target E \[s\]: 3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.](#)

[Standards included in Target E: 3.NBT.A.1, 3.NBT.A.2, 3.NBT.A.3](#)

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Content Domain: Number & Operations in Base Ten

Target E [s]: 3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.

Standards included in Target E: 3.NBT.A.1, 3.NBT.A.2, 3.NBT.A.3

3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.

3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

Vertical Alignment

Related Grade 2 standards

2.NBT.A Understand place value.

2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.

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2.NBT.B Use place value understanding and properties of operations to add and subtract.

2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.

2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.

Related Grade 4 Standards

4.NBT.A Generalize place value understanding for multi-digit whole numbers.

4.NBT.A1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.

4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.

4.NBT.B Use place value understanding and properties of operations to perform multi-digit arithmetic.

4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Achievement Level Descriptors

Level 1 Students should be able to add and subtract within 100, using strategies and algorithms based on place value understanding. They should be able to round two-digit whole numbers to the nearest 10.

Level 2 Students should be able to add and subtract within 1,000, using strategies and algorithms based on the relationship between addition and subtraction. They should be able to round whole numbers to the nearest 100 and multiply one-digit whole numbers by multiples of 10 in the range of 10–90.

Level 3 Students should be able to fluently add and subtract within 1,000, using strategies or algorithms based on place value understanding, properties of arithmetic, and/or the relationship between addition and subtraction.

Level 4 Students should be able to use multiple strategies to fluently add and subtract within 1,000.

Evidence Required

1. The student solves non-contextual problems using place value understanding to round whole numbers to the nearest 10 or 100.
2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. The student solves non-contextual computation problems by multiplying one-digit whole numbers by multiples of 10 properties of operations.

Vocabulary

round to the nearest, add, subtract, sum, difference, multiply, place value, addend

Response Types

Equation/Numeric

Materials

n/a

Attributes

Standard 3.NBT.A.3 allows the product of the multiplication equation to be outside the range of 0-100. Equations are limited to multiplying a one-digit number by a multiple of 10 within the range of 10-90.

Claim 1: Concepts and Procedures (DOK 1) Question Banks

Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.

Claim 1 3.NBT.A.1 DOK Level 1

Use place value understanding to round whole numbers to the nearest 10 or 100.

Evidence Required

The student solves non-contextual problems using place value understanding to round whole numbers to the nearest 10 or 100.

Question Type 1: The student is presented with a two- or three-digit number, and then asked to round to the nearest ten or hundred.

1. What is 44 rounded to the nearest ten?
2. What is 456 rounded to the nearest ten?
3. What is 726 rounded to the nearest hundred

Rubric: (1 point) The student correctly enters the number rounded to the given place (e.g., 40; 460; 700).

Response Type: Equation/Numeric

Question Type 2: The student is given a two- or three-digit whole number rounded to the nearest ten or hundred.

1. When rounding to the nearest ten, what is the least whole number that rounds to 50?
2. When rounding to the nearest ten, what is the greatest whole number that rounds to 50?
3. When rounding to the nearest hundred, what is the least whole number that rounds to 500?
4. When rounding to the nearest hundred, what is the greatest whole number that rounds to 500?
5. When rounding to the nearest ten, what is the least whole number that rounds to 520?
6. When rounding to the nearest ten, what is the greatest whole number that rounds to 520?

Rubric: (1 point) The student correctly enters the least/greatest whole number that rounds to the given number (e.g., 45; 54; 450; 549; 515; 524).

Response Type: Equation/Numeric

Claim 1 3.NBT.B.2 DOK Level 1

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Evidence Required

The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Question Type 1: The student is presented with a non-contextual addition equation. One addend is within 5 of 100 and one addend is 100.

1. What unknown number makes this equation true?

$$763 + 29 = \square$$

2. What unknown number makes this equation true?

$$\square = 763 + 29$$

Question Type 2: The student is presented with a non-contextual, straightforward subtraction equation with two to four subtrahends.

1. What unknown number makes this equation true?

$$763 - 96 = \square$$

2. What unknown number makes this equation true?

$$\square = 763 - 96$$

Rubric: The student enters the correct difference (e.g., 792; 792; 667; 667).

Response Type: Equation/Numeric

Claim 1 3.NBT.A.2 DOK Level 1

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Evidence Required

The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Question Type 1: The student is presented with a non-contextual addition equation. One addend is within 5 of 100 and one addend is 100.

1. What unknown number makes this equation true?

$$763 + 97 = 763 + 100 - \square$$

2. What unknown number makes this equation true?

$$763 + 104 = 763 + 100 + \square$$

Question Type 2: The student is presented with a non-contextual addition equation. One addend is within 4 of multiple of ten and one addend is a multiple of 100.

1. What unknown number makes this equation true?

$$763 + 7 = 700 + \square$$

2. What unknown number makes this equation true?

$$763 + 43 = 800 + \square$$

Rubric: The student enters the correct number to make the equation true (e.g., 3; 4; 70; 6).

Response Type: Equation/Numeric

Question Type 3: The student is presented with a non-contextual subtraction equation. One subtrahend is within 5 of 100 and one subtrahend is 100.

1. What unknown number makes this equation true?

$$763 - 97 = 763 - 100 + \square$$

2. What unknown number makes this equation true?

$$763 - 104 = 763 - 100 - \square$$

Question Type 4: The student is presented with a non-contextual subtraction equation. One subtrahend is a multiple of 10.

1. What unknown number makes this equation true?

$$763 - 43 = 763 - 40 - \square$$

2. What unknown number makes this equation true?

$$760 - 70 = 760 - 60 - \square$$

Rubric: The student enters the correct number to make the equation true (e.g., 3; 4; 3; 10).

Response Type: Equation/Numeric

Question Type 5: The student is presented with a table and sums or differences (but not both), and classifies them as closer to a given number or greater than/less than a given number.

1. Select whether each sum is greater than 80 or less than 80.

Sums	Greater than 80	Less than 80
41 + 42		
33 + 35		
41 + 36		
46 + 37		

2. Select whether each difference is greater than 40 or less than 40.

Difference	Greater than 40	Less than 40
83 - 40		
85 - 43		
83 - 45		
80 - 43		

3. Select whether each difference is greater than 40 or less than 40.

Difference	Greater than 40	Less than 40
80 - 49		
80 - 43		
80 - 38		

Rubric: (1 point) The student enters the correct value for the unknown (e.g., GLLG; GGLL; LLG).

Response Type: Matching Tables

4. Identify whether each sum is closer to 70 or closer to 80.

Sums	Closer to 70	Closer to 80
32 + 47		
26 + 51		
35 + 37		

5. Click the table to show whether each sum is closer to 400 or closer to 500.

Sums	Closer to 400	Closer to 500
302 + 105		

Sums	Closer to 400	Closer to 500
$398 + 49$		
$212 + 247$		
$196 + 251$		

Rubric: (1 point) The student enters the correct value for the unknown (e.g., 80, 80, 70; 400, 400, 500, 400).

Response Type: Matching Tables

Claim 1 3.NBT.A.3 DOK Level 1

Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

Evidence Required

The student solves non-contextual computation problems by multiplying one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations.

Question Type 1: The student is presented with a multiplication equation including an unknown factor or product.

1. What unknown number makes the equation true?

$$5 \times 80 = \square$$

2. What unknown number makes the equation true?

$$3 \times \square = 180$$

3. What unknown number makes this equation true?

$$180 = \square \times 3$$

4. What unknown number makes this equation true?

$$60 \times \square = 540$$

5. What unknown number makes this equation true?

$$540 = \square \times 60$$

Rubric: (1 point) The student enters the correct product (e.g., 400; 60; 60; 9; 9).

Response Type: Equation/Numeric

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Claim 1 3.NBT.B.3 DOK Level 1

Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

Evidence Required

The student solves non-contextual computation problems by multiplying one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations.

Question Type 1: A whole number multiplication equation presented horizontally including three factors.

1. What unknown number makes the equation true?

$$(6 \times 5) \times \square = 240$$

Rubric: (1 point) The student enters the correct value for the unknown (e.g., 8).

Response Type: Equation/Numeric

Claim 2 Problem Solving Question Banks

[Claim Descriptors and Targets](#)

Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies.

Example 1

Sabina has a jar full of dimes. A pack of cards cost 76 cents. How many dimes would she need to buy the cards if she uses no other coins?

Enter your answer in the response box.

Rubric: (1 point) The student enters the correct number of dimes (8).

Response Type: Equation/Numeric